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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,963	02/22/2002	John Murdock	END920010083	1606

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EXAMINER

PHILIPPE, GIMS S

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 07/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/080,963

Applicant(s)

MURDOCK ET AL.

Examiner

Gims S. Philippe

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Amendment

1. Applicant's amendment received on April 8, 2005 in which claims 1, 3, 5, 8, 10, 12, 15, 17, and 19 were amended has been fully considered and entered but the arguments are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6-11, 13-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al (US Patent no. 5,724,098) in view of Wang (US Patent no. 6281942).

Regarding claims 1, 8 and 15, Murakami discloses the same program, system and method of filtering pixels of a video frame of a sequence of video frames (See Murakami's Abstract) comprising determining a pixel value difference between a pixel a current frame and a corresponding pixel of temporally previous frame (See Murakami fig. 9 and fig. 17, item 33, and col. 4, lines 1-6 and lines 51-58); and adaptively filtering said pixel of said current frame using a filter coefficient (See col. 12, lines 10-19), said

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adaptively filtering comprising employing said pixel value difference to select said filter coefficient for use filtering said pixel (See col. 12, lines 33-49).

It is noted that Murakami is silent about employing an uncompressed pixel to select the filter coefficient to output a filtered pixel value as specified in the amended claims.

However, Wang discloses adaptive filtering including the step of employing an uncompressed pixel to select the filter coefficient to output a filtered pixel value (See Wang Fig. 2, col. 4, lines 48-64, also see col. 3, lines 32-44).

Therefore, it is considered obvious that one skilled in the art at the time of the invention would recognize the advantage of modifying Murakami's filtering method by incorporating Wang's step of using an uncompressed pixel to select the filter coefficient to output a filtered pixel value. The motivation for such a modification in Murakami is to remove unwanted noise and simultaneously improve the image quality as taught by Wang (See Wang col. 6, lines 26-31).

As per claims 2-3, 9-10 and 16-17, most of the limitations of these claims have been noted in the above rejection of claims 1, 8 and 15. In addition, Murakami further employs a threshold with coefficients by performing adaptive filtering (See Murakami col. 11, lines 54-65, and col. 12, lines 10-19).

As per claims 4, 11 and 18, most of the limitations of these claims have been noted in the above rejection of claims 2, 9, and 16. In addition, Murakami further discloses

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providing more than one thresholds with more than one filter coefficients (See Col. 12, lines 50-67 col. 13, lines 1-10).

As per claims 6, 13, and 20, most of the limitations of these claims have been noted in the above rejection of claims 1, 8, and 15. In addition, the step of operating with only the field instead of frames in Murakami is considered as disclosing the repeat field (See Murakami col. 15, lines 36-50).

As per claims 7 and 14, most of the limitations of these claims have been noted in the above rejection of claims 6 and 13. In addition, the difference calculator 30 of Mukarami's fig. 2, does comprise the calculation logic (Also see col. 9, lines 1-12).

4. Claims 5, 12, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al. (US Patent no. 5724098) in view of Wang (US Patent no. 6281942) as applied to claims 1, 8 and 15 above, and further in view of Mack et al. (US Patent no. 5434567).

As per claims 5, 12, and 19, most of the limitations of these claims have been noted in the above rejection of claims 1, 8, and 15.

It is noted that the combination of Murakami and Wang is silent about outputting pixel value that are determined by $FPV = P1(f) + P2(1-f)$ as specified in the claims.

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However, Mack discloses outputting pixel value that are determined by $FPV = P1(f) + P2(1-f)$ (See Mack col. 14, line 5).

Therefore, it is considered obvious that one skilled in the art at the time of the invention would recognize the advantage of modifying Murakami by incorporating Mack's step of outputting pixel value that are determined by the expression. The motivation for such a modification is to help stimulate motion between successive images and smooth the transition associated with scene changes as taught by Mack (See Mack col. 14, lines 17-20).

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gims S. Philippe whose telephone number is (571) 272-7336. The examiner can normally be reached on M-F (9:30-7:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dastouri S. Mehrdad can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Gims S Philippe
Primary Examiner
Art Unit 2613

GSP

June 28, 2005